CLAIMS

What Is Claimed Is:

1. An implantable lead for transmitting electrical signals between a proximal end and a distal end, the lead comprising:

a lead body defining at least one longitudinally-extending lumen; and

a plurality of individual electrical conductors contained in the lumen of the lead body and extending between the proximal and distal ends, the plurality of individual conductors sharing a common insulating coating that insulates the plurality of individual conductors from each other.

2. The lead of claim 1 in which:

each of the plurality of individual electrical conductors comprises a multifilar cable conductor.

3. The lead of claim 1 in which:

each of the plurality of individual electrical conductors comprises a non-coiled monofilament wire.

4. The lead of claim 1 in which:

the common insulating coating electrically isolates the plurality of conductors from each other.

5. The lead of claim 4 in which:

the common insulating coating includes a bridging portion extending between individual conductors.

6. The lead of claim 5 in which:

the bridging portion of the common insulating coating is perforated to impart additional flexibility to the coating.

7. The lead of claim 1 in which:

the conductors are in electrical contact along their lengths.

8. The lead of claim 1 in which:

the plurality of electrical conductors and the common insulating coating comprise a conductor assembly.

9. The lead of claim 8 in which:

the conductor assembly has a helical configuration defining a longitudinally-extending passageway for receiving a stylet or guide wire for placing the distal end of the lead.

10. The lead of claim 9 in which:

the common insulating coating has, in cross section, a generally oval shape having a longer dimension extending in the longitudinal direction.

11. The lead of claim 10 in which:

the plurality of individual conductors are spaced apart in the longitudinal direction within the common insulating coating.

12. The lead of claim 8 in which:

the conductor assembly has a tubular configuration.

13. The lead of claim 12 in which:

the plurality of individual conductors are embedded within the common insulating coating in spaced-apart, parallel relationship.

14. The lead of claim 12 in which:

the plurality of individual conductors are embedded within the common insulating coating and follow a generally helical path along the length of the lead body.

15. An implantable lead for transmitting electrical signals between a multiple-contact electrical connector at a proximal end of the lead and a plurality of electrodes disposed along a distal end of the lead, the electrical connector being adapted to be received by a receptacle in an implantable medical device, the lead comprising:

a longitudinally-extending lead body comprising an insulating housing defining a plurality of longitudinally-extending lumens, at least one of the lumens containing an electrical conductor assembly comprising at least two electrical multifilar cable conductors sharing a common insulating coating, wherein the common insulating coating insulates the at least two electrical cable conductors from each other, the electrical cable conductors connecting at least one of the contacts on the electrical connector with at least one of the electrodes.

16. The lead of claim 15 in which:

the common insulating coating electrically isolates the at least two cable conductors from each other, a first of the at least two cable conductors electrically connecting a first contact on the electrical connector with a first one of the plurality of electrodes, and a second of the at least two cable conductors electrically connecting a second contact on the electrical connector with a second one of the plurality of electrodes.

17. The lead of claim 16 in which:

the common insulating coating includes a bridging portion extending between adjacent ones of the at least two electrical cable conductors.

18. The lead of claim 17 in which:

the bridging portion of the common insulating coating is perforated to impart additional flexibility to the coating.

19. The lead of claim 15 in which:

the at least two cable conductors are in electrical contact along their lengths, the at least two cable conductors electrically connecting one of the contacts on the electrical connector with one of the plurality of electrodes.

20. The lead of claim 15 in which:

each of at least two of the lumens contain an electrical conductor assembly, each of the conductor assemblies comprising at least two electrical multifilar cable conductors sharing a common insulating coating, the cable conductors of one of the conductor assemblies connecting at least one of the contacts on the electrical connector with at least one of the electrodes, and the cable conductors of the other of the conductor assemblies connecting at least one of the remaining contacts on the electrical connector with at least one of the remaining electrodes.